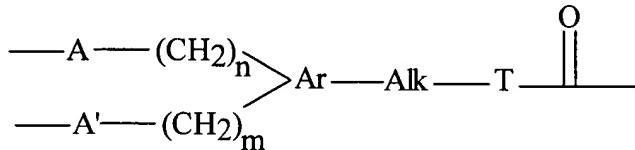


*B1  
CONT.*

where A and A' define a respective ester linkage between an hydroxy on the linker and the carboxy on R<sub>1</sub> or R<sub>2</sub> or an ester linkage between a carboxy on the linker and the hydroxy on R<sub>1</sub> as a fatty alcohol, or an amide linkage between an amine on the linker and a carboxy on R<sub>1</sub> or R<sub>2</sub>, or an amide linkage between a carboxy on the linker and an amine on R<sub>1</sub> or R<sub>2</sub>, or one of A and A' is as defined and the other is hydroxy, amino or carboxy in the event that R<sub>1</sub> itself is a free hydroxy, amino or carboxy group.--

---

Please replace the paragraph beginning on page 6, line 1, with the following rewritten paragraph:



*B2*  
where Ar is a saturated or unsaturated, preferably monocyclic carbo- or

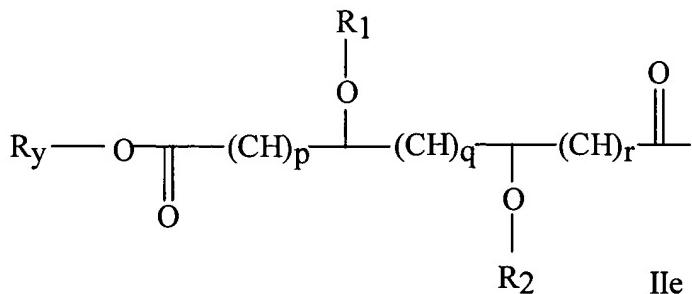
heterocycle with 5 or 6 ring atoms; and

A, A', T, Alk, m and n are as defined above.--

---

Please replace the paragraph beginning on page 9, line 8, with the following rewritten paragraph:

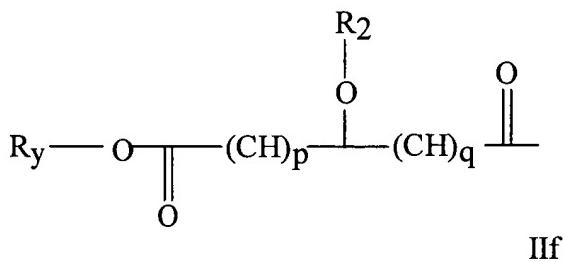
--Favoured linkers of the tartaric acid series above can be generically depicted as  
Formula IIe:



and isomers where  $\text{R}_1$  and  $\text{R}_2$  are reversed, where  $\text{R}_1$  and  $\text{R}_2$  are as shown above,  $p$ ,  $q$  and  $r$  are each independently 0 to 5, preferably 0 or 1 and  $\text{R}_y$  is the free acid, an  $\text{R}_1$  ester or a conventional pharmaceutically acceptable carboxy protecting group, such as the methyl, benzyl or especially the ethyl ester.--

Please replace the paragraph beginning on page 9, line 20, with the following rewritten paragraph:

-- Favoured linkers of the malic series have the formula IIIf:

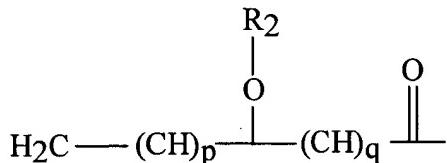


where  $\text{R}_y$ ,  $p$ ,  $q$  and  $\text{R}_2$  are as defined above, preferably those where  $p$  and  $q$  are zero.--

Please replace page 12 with the following rewritten page 12:

--example on the  $\beta$ -carbon. In this embodiment the fatty acid of  $\text{R}_1$  is esterified directly on the 5'-hydroxy (or equivalent) function of the nucleoside, generally with the  $\text{R}_2$  group already esterified/amide bonded thereon. Alternatively, the functionalised fatty acid (the carboxy/hydroxy/amino function being appropriately protected) can be first esterified to

the nucleoside and deprotected prior to coupling with R<sub>2</sub>. Linkers in accordance with a preferred embodiment of this aspect have the formula IIId:

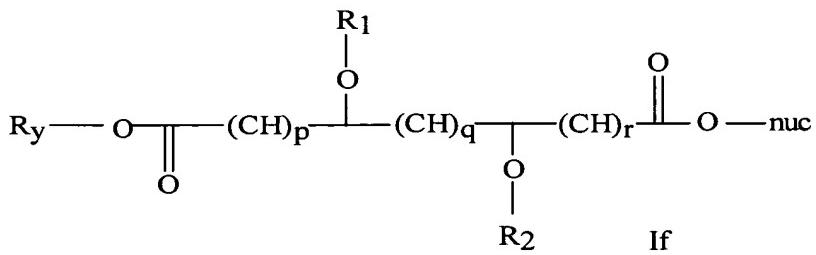


IIId

where R<sub>2</sub> is the residue of an aliphatic L-amino acid and, p is 0, 1 or 2-20 (optionally including a double bond) and q is 0-5, preferably 0. Representative compounds include:

- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-butyryl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-hexanoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-octanoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-decanoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-dodecanoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-myristoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-palmitoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-stearoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-docosanoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-eicosanoyl] guanosine
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-isoleucyloxy)-butyryl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-isoleucyloxy)-hexanoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-isoleucyloxy)-octanoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-isoleucyloxy)-decanoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-isoleucyloxy)-dodecanoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-isoleucyloxy)-myristoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-isoleucyloxy)-palmitoyl] guanosine,--

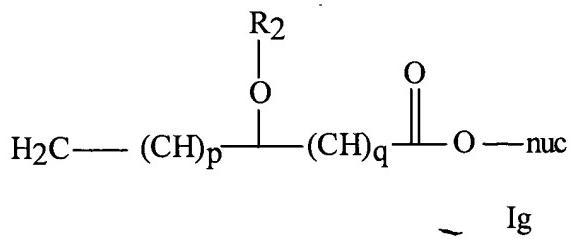
Please replace the paragraph beginning on page 21, line 1, with the following rewritten paragraph:



where R<sub>1</sub>, R<sub>2</sub>, R<sub>y</sub>, p, q, r and o-nuc are as defined above.--

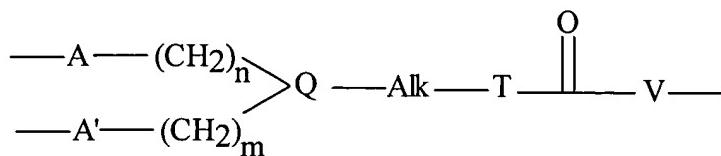
Please replace the paragraph beginning on page 22, line 1, with the following rewritten paragraph:

-- The invention also extends to compounds of the formula Ig



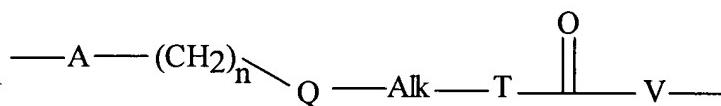
where R<sub>2</sub>, p, q and O-nuc are as defined above.--

Please replace the paragraph beginning on page 43, line 1, with the following rewritten paragraph:



IIaa

88

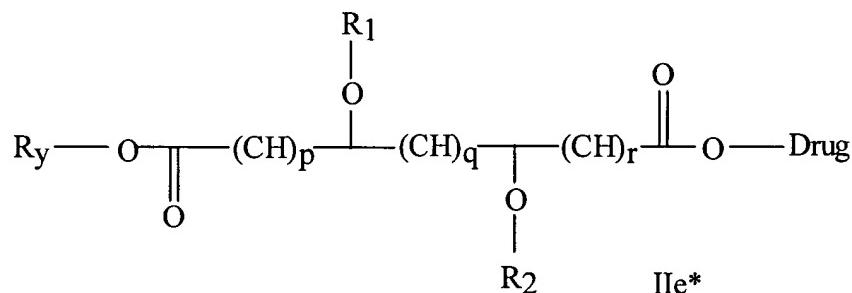


II'a a

where A and A' are independently--

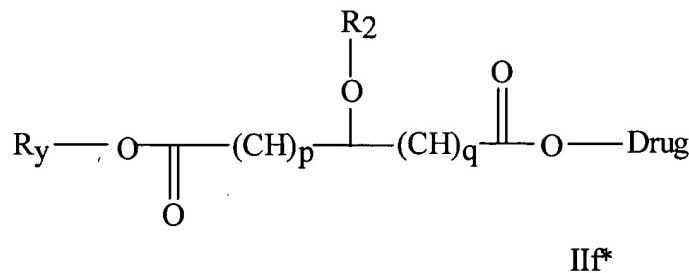
Please replace the paragraph beginning on page 44, line 11, with the following rewritten paragraph:

--formula II e\*, that is

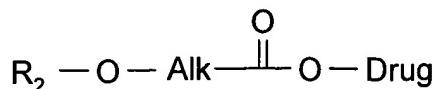


B9

formula II f\*, that is



Formula Id\*, that is

*Id\**

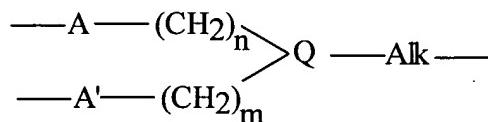
—

*B9  
corr.*

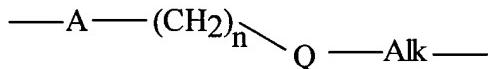
Please replace page 45, with the following rewritten page:

-- Where the Drug comprises a carboxyl function, the linker may comprise a structure of the formulae VIII or VIII':

where A, A', Q, Alk, m, and n are as defined for Formula IIaa & II'aa.



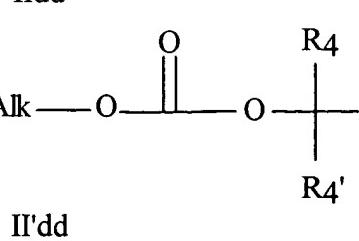
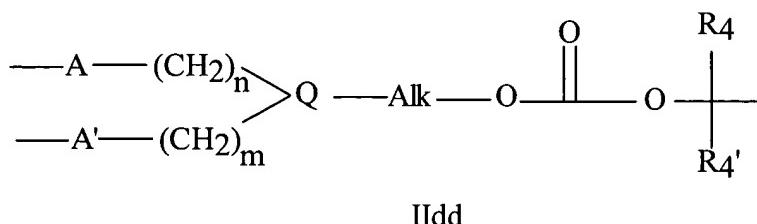
VIII



VIII'

*B10*

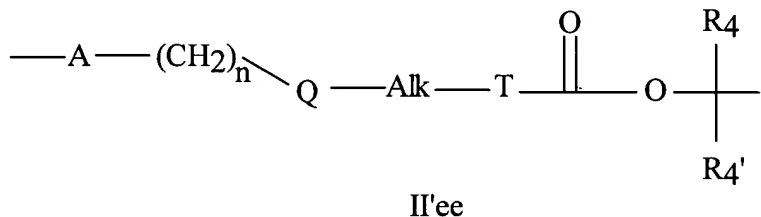
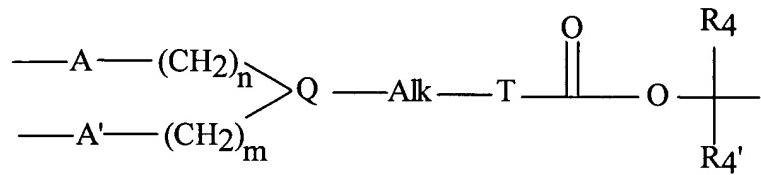
Preferably, however, when the Drug comprises a carboxy function, the di- or trifunctional linker group L is a structure of Formulae IIdd or II'dd (that is a compound of Formulae IIaa or II'aa, wherein T is O and V is a structure of the formula IIbb):



*B10  
C9*  
In structure IIdd, R<sub>4'</sub> is preferably hydrogen and R<sub>4</sub> is ethyl, phenyl, and especially methyl or hydrogen or R<sub>4</sub> and R<sub>4'</sub> together define isopropyl--

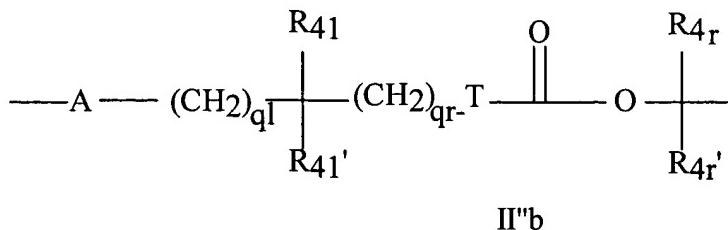
Please replace page 46, with the following rewritten page:

-- Where the Drug comprises a phosphoryl, phosphinyl or phosphonyl function, the di- or trifunctional linker group L may comprise a structure of the formula IIaa or II'aa, especially those of the formula IIee or II'ee:



where T is a bond, -NH- or -O- and Q and A are as defined above including the cyclic Q structures such as cycloalkyl, phenyl and heterocycles such as furyl, pyridyl etc. In structures IIee and II'ee, R<sub>4'</sub> is preferably hydrogen and R<sub>4</sub> is methyl, ethyl, phenyl and especially hydrogen or R<sub>4</sub> and R<sub>4'</sub> define isopropyl.

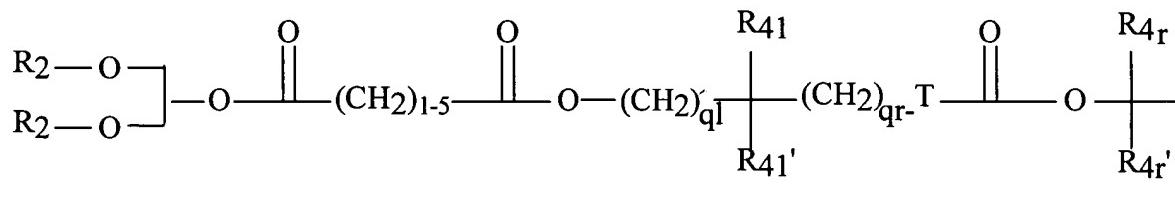
Preferably, however, where the Drug comprises a phosphonyl, phosphinyl or phosphoryl function, the difunctional linker comprises a structure of the formula II''b:



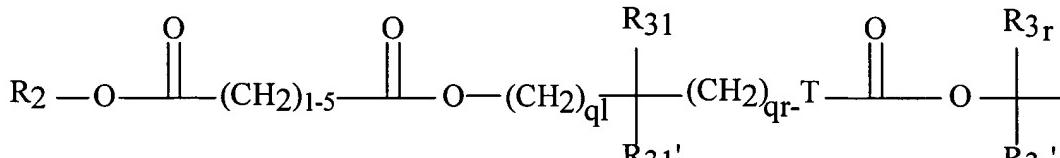
where T is a bond, -O- or -NH-, R<sub>41</sub>, R<sub>4r</sub> and R<sub>41'</sub> and R<sub>4r'</sub> are independently H or C<sub>1</sub>-C<sub>3</sub> alkyl and A is as defined above (or wherein A is a further difunctional linker to--

Please replace the paragraph beginning on page 47, line 1, with the following rewritten paragraph:

-- which one or more R<sub>2</sub> depends as described above). Examples of structures belonging to the latter possibility for A include those of Formula Va and Vb:



B12

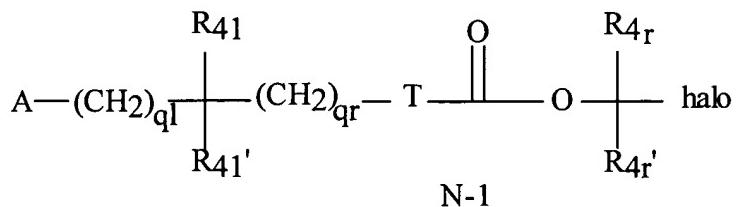


Vb

where T, q, R<sub>2</sub>, R<sub>41</sub>, R<sub>4r</sub> and R<sub>4r'</sub> are as defined above. Although formulae Va and Vb depict the dicarboxylate moiety as unbranched, it will be apparent that a wide variety of dicarboxylates will be suitable here, including branched and/or unsaturated and/or substituted dicarboxylic acid derivatives of various lengths, as described in more detail above.--

Please replace the paragraph beginning on page 48, line 23, with the following rewritten paragraph:

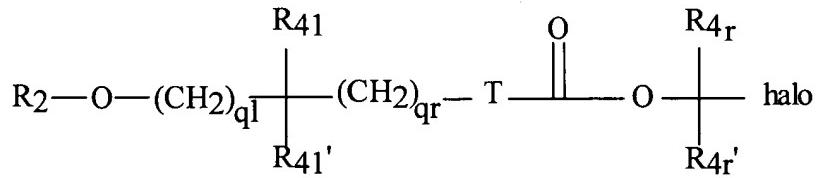
-- A further aspect of the invention comprises novel intermediates useful in applying structures of the formulae II'b to a drug and having the formula N-1:



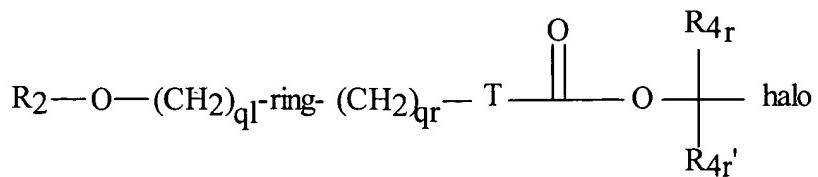
where A, q, R<sub>4</sub>, R<sub>4'</sub> and T are as defined for formula II'b.--

Please replace the paragraph beginning on page 49, line 1, with the following rewritten paragraph:

-- A particularly preferred group of compounds substantially within formula N-1 are those of the formula N-2



or



where

$R_2$  is the acyl residue of an aliphatic amino acid,

$R_{3L}$  and  $R_{3L'}$  are independently H, C<sub>1-3</sub> alkyl, C<sub>3-6</sub>cycloalkyl, C<sub>1-3</sub>alkyl-C<sub>1</sub>C<sub>6</sub>cycloalkyl phenyl or benzyl,

$R_{3R}$  and  $R_{3R'}$  are independently H or C<sub>1-3</sub> alkyl

$q_1$  is 0-3,  $q_2$  is 0-3,

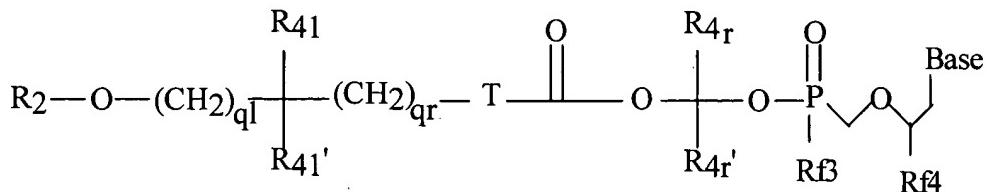
T is a bond, -NR<sub>3-</sub> or -O-

$R_3$  is H or C<sub>1-3</sub>alkyl;

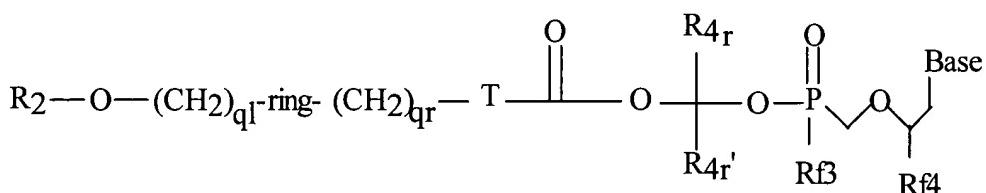
"ring" is an optionally substituted aromatic or non-aromatic, hetero-or carbocycle; and halo is bromo, chloro or iodo. --

Please replace the paragraph beginning on page 61, line 1, with the following rewritten paragraph:

-- Taking the phosphonate antivirals adefovir and cidovir as examples, prodrugs of the invention can be applied as shown in Formula PF2:



or



where

$R_2$  is the acyl residue of an aliphatic amino acid,

$R_{4L}$  and  $R_{4L'}$  are independently H, C<sub>1-3</sub> alkyl, C<sub>3-6</sub>cycloalkyl, C<sub>1-3</sub>alkyl-C<sub>1</sub>C<sub>6</sub>cycloalkyl phenyl or benzyl,

$R_{4R}$  and  $R_{4R'}$  are independently H, C<sub>1-3</sub> alkyl or phenyl  
 $q_l$  is 0-3,  $q_r$  is 0-3,

T is a bond, -NR<sub>4-</sub> or -O-

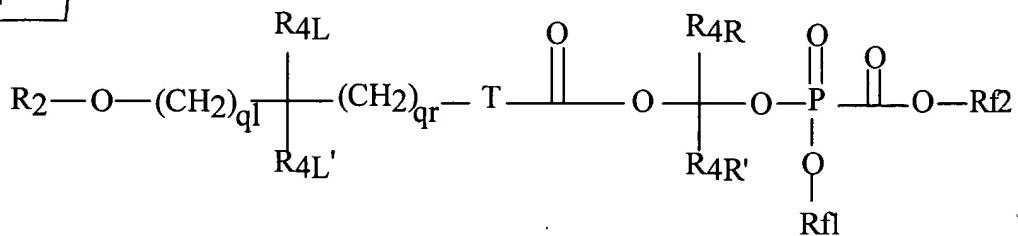
$R_4$  is H or C<sub>1-3</sub>alkyl;

ring is an optionally substituted aromatic or non-aromatic, hetero-or carbocycle;

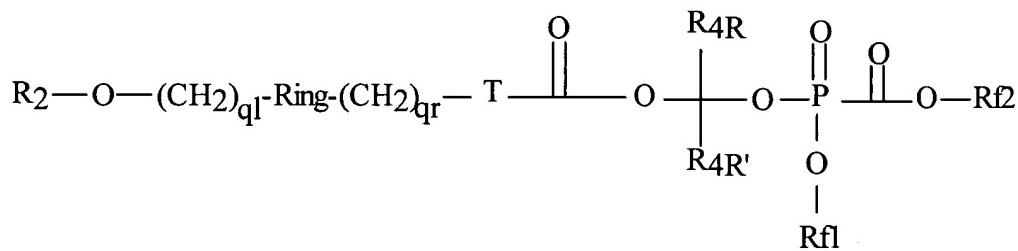
base is a natural or unnatural nucleotide base, especially guanine, adenine or cytosine,

Rf<sub>3</sub> is H or a further structure of the formula II"b and Rf<sub>4</sub> is H or CH<sub>2</sub>OH.--

Please replace the paragraph beginning on page 65, line 1, with the following rewritten paragraph:



or



where

$R_2$  is the acyl residue of an aliphatic amino acid,

$R_{4L}$  and  $R_{4L'}$  are independently H, C<sub>1-3</sub> alkyl, C<sub>3-6</sub>cycloalkyl, C<sub>1-3</sub>alkyl-C<sub>1</sub>C<sub>6</sub>cycloalkyl phenyl or benzyl,

$R_{4R}$  and  $R_{4R'}$  are independently H, C<sub>1-3</sub> alkyl or phenyl

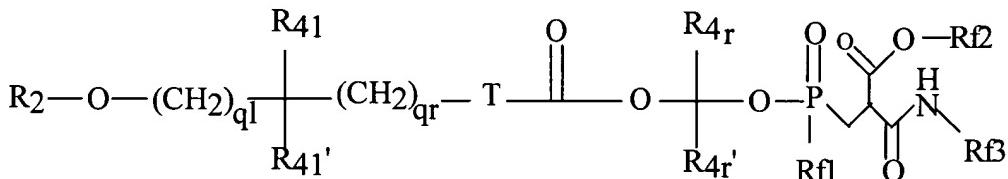
ql is 0-3, qr is 0-3,

T is a bond, -NR<sub>4</sub>- or -O-

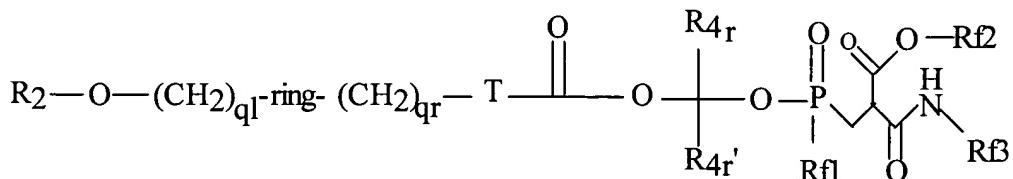
R<sub>4</sub> is H or C<sub>1-3</sub>alkyl;

*B16 cont.*  
ring is an optionally substituted aromatic or non-aromatic, hetero- or carbocycle;  
and Rf1 is H or a further ester of formula II''b and Rf2 is H or a conventional  
pharmaceutically acceptable ester.--

Please replace the paragraph beginning on page 68, line 1, with the following rewritten paragraph:



or



where RF1 is H or a further structure of formula II''b

Rf2 is H or a conventional pharmaceutically acceptable ester,

Rf3 is a polyunsaturated, branched C<sub>6-22</sub> alkyl,

R<sub>2</sub> is the acyl residue of an aliphatic amino acid,

R<sub>4L</sub> and R<sub>4L'</sub> are independently H, C<sub>1-3</sub> alkyl, C<sub>3-6</sub>cycloalkyl, C<sub>1-3</sub>alkyl-C<sub>1</sub>C<sub>6</sub>cycloalkyl phenyl or benzyl,

R<sub>4R</sub> and R<sub>4R'</sub> are independently H, C<sub>1-3</sub> alkyl or phenyl

ql is 0-3, qr is 0-3,

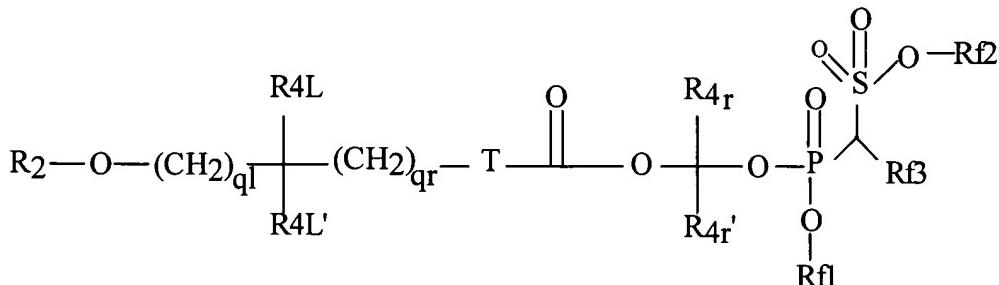
T is a bond, -NR<sub>4</sub>- or -O-

*B17  
C11* R<sub>4</sub> is H or C<sub>1-3</sub>alkyl;

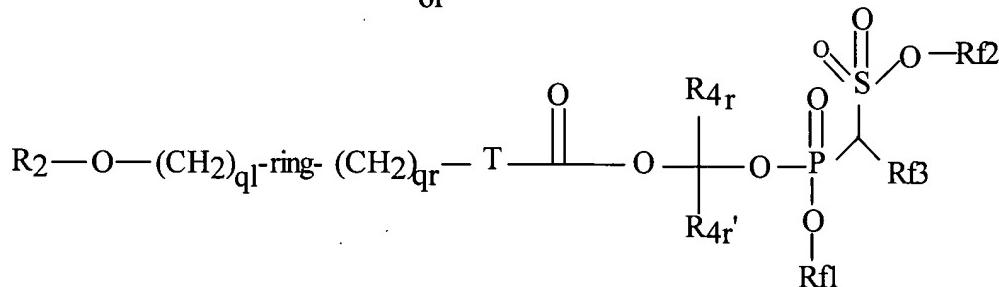
ring is an optionally substituted aromatic or non-aromatic, hetero- or carbocycle.--

Please replace the paragraph beginning on page 69, line 4, with the following rewritten paragraph:

-- Other structurally similar phosphonates include  $\alpha$ -phosphonosulphonates such as squalene synthase inhibitors of the formula PF5:



or



where RF1 is H or a further structure of formula II'b

Rf2 is H or a conventionally pharmaceutically acceptable ester a further structure of formula II'b

Rf3 is a polyunsaturated, branched C<sub>6-22</sub> alkyl,

R<sub>2</sub> is the acyl residue of an aliphatic amino acid,

R<sub>4L</sub> and R<sub>4L'</sub> are independently H, C<sub>1-3</sub> alkyl, C<sub>3-6</sub>cycloalkyl, C<sub>1-3</sub>alkyl-C<sub>1</sub>C<sub>6</sub>cycloalkyl phenyl or benzyl,

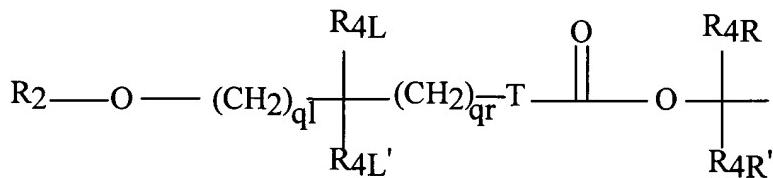
R<sub>4R</sub> and R<sub>4R'</sub> are independently H, C<sub>1-3</sub> alkyl or phenyl

ql is 0-3, qr is 0-3,

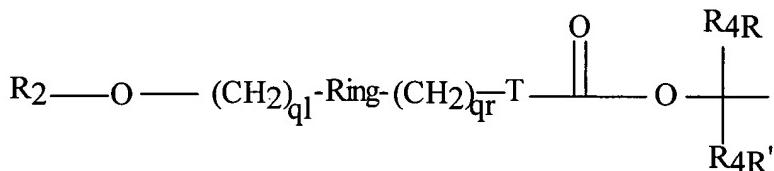
T is a bond, -NR<sub>4-</sub> or -O-

*B18  
cont.*  
 $R_4$  is H or  $C_{1-3}$ alkyl;  
ring is an optionally substituted aromatic or non-aromatic, hetero- or carbocycle.--

Please replace the paragraph beginning on page 73, line 1, with the following rewritten paragraph:



or



where

$R_2$  is the acyl residue of an aliphatic amino acid,

$R_{4L}$  and  $R_{4L}'$  are independently H,  $C_{1-3}$  alkyl,  $C_{3-6}$ cycloalkyl,  $C_{1-3}$ alkyl- $C_1C_6$ cycloalkyl phenyl or benzyl,

$R_{4R}$  and  $R_{4R}'$  are independently H or  $C_{1-3}$  alkyl

$q_1$  is 0-3,  $q_2$  is 0-3,

T is a bond,  $-NR_4-$  or  $-O-$

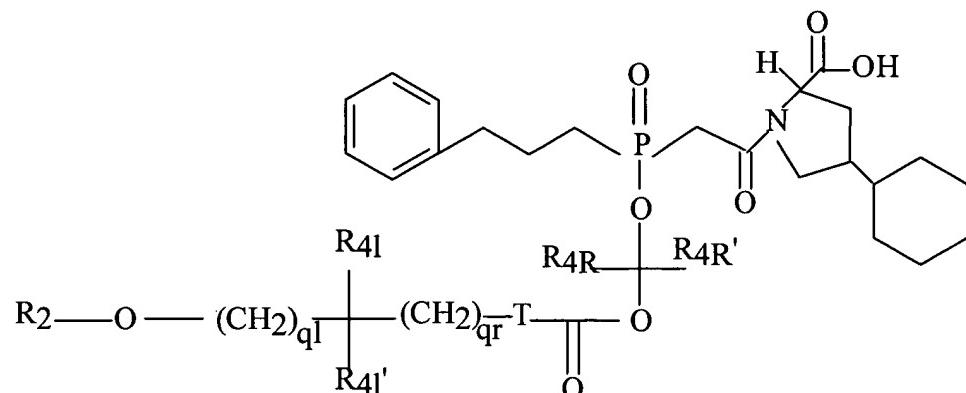
$R_4$  is H or  $C_{1-3}$ alkyl;

ring is an optionally substituted aromatic or non-aromatic, hetero- or carbocycle;

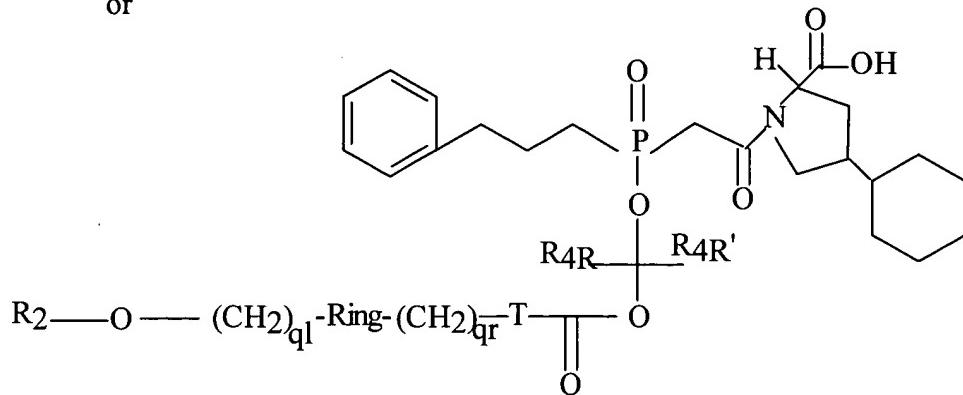
*B19 CTR*  
and the remainder of Ra1-4 are hydrogen or conventional pharmaceutically acceptable esters.--

Please replace the paragraph beginning on page 85, line 16, with the following rewritten paragraph:

--A still further preferred group of prodrugs of the invention are those based on fosinoprilate having the formula PF3:

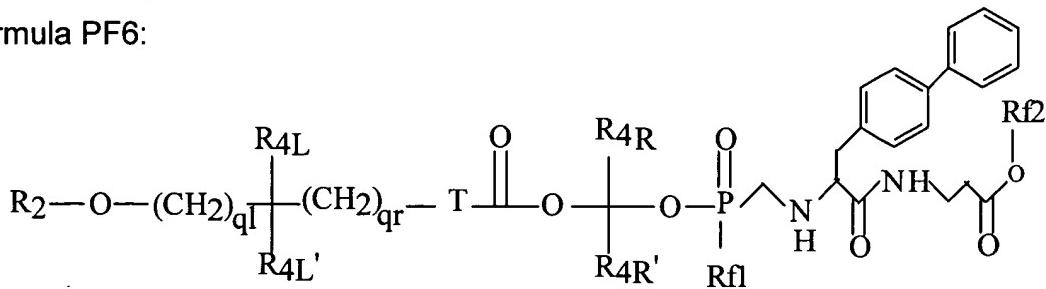


or

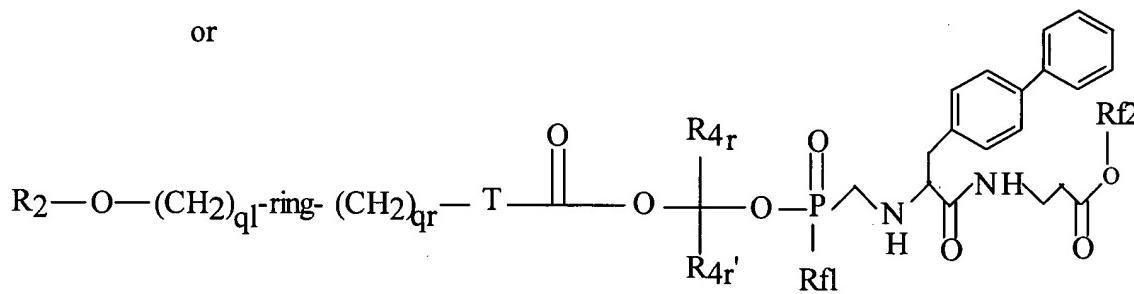


Please replace the paragraph beginning on page 88, line 13, with the following rewritten paragraph:

-- A further phosphonate compound amenable to the prodrugs of the invention are the neutral endopeptidase inhibitors such as CGS-24592 (Novartis), preferably those of the formula PF6:



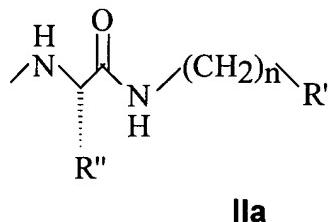
or



where RF1 is H or a further structure of formula II'b --

Please replace the paragraph beginning on page 100, line 21, with the following rewritten paragraph:

-- Disclosed embodiments of Formula II for the A'/A" groups of the compounds of formula I include those of the formula IIa:



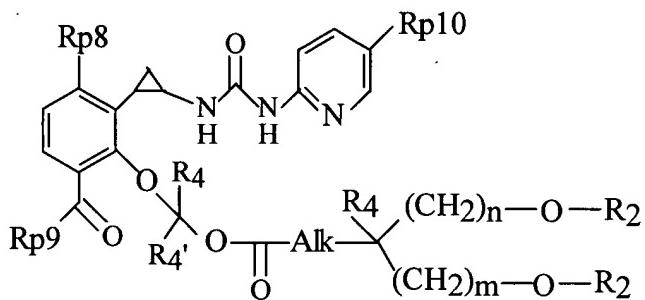
where n is 1 or 2 and R' is alkyloxy, preferably methyloxy, or those where n is 0 and R' is

methyl.--

B22  
CONT-

Please replace the paragraph beginning on page 130, line 18, with the following rewritten paragraph:

-- One variant of a branched Alk<sup>b</sup> in Formula P5 can be substituted with hydroxy which in turn is esterified with a further R<sup>2</sup>, thus defining a linker of the formula IIa, as depicted in Formula P6:



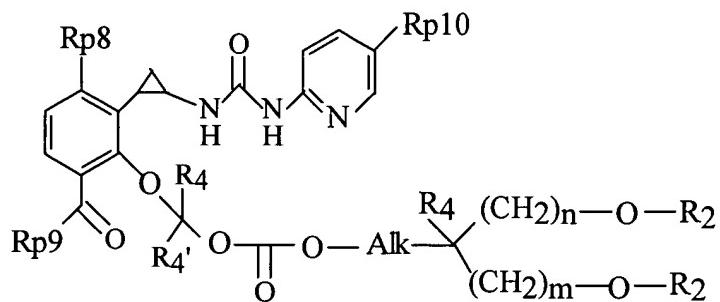
P6

where Rp8, Rp9, Rp10, Alk, R<sub>4</sub>, R<sub>4'</sub>, m, n and R<sub>2</sub> are as defined above. Preferably each occurrence of Rx and Rx' is H. Particularly favoured values for Alk, m and n include: methylene:1:1 and absent: 1:0 respectively.--

Please replace the paragraph beginning on page 131, line 1, with the following rewritten paragraph:

-- A further favoured group of compounds has the Formula P7:

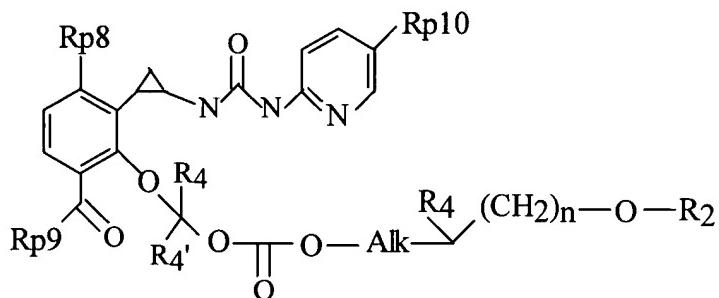
B24



P7

where Rp8, Rp9, Rp10, Alk, R<sub>4</sub>, R<sub>4'</sub>, m, n and R<sub>2</sub> are as defined above or wherein the -()<sub>m</sub>-O-R<sub>2</sub> arm is absent. Preferably each occurrence of Rx and Rx' is H. Particularly favoured values for Alk, m and n include:absent:1:1, thus defining a glycerol derivative. Where the -()<sub>m</sub>-O-R<sub>2</sub> arm is absent to define a structure of the formula P7':

B24  
CONT.



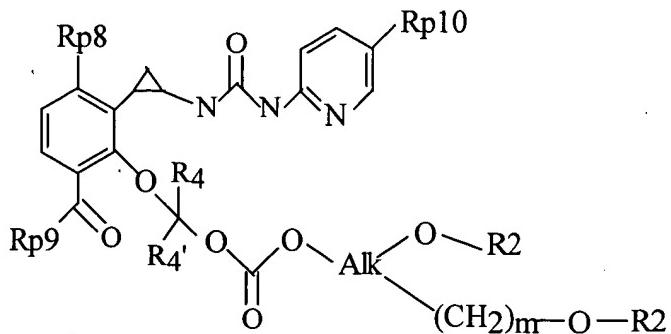
P7'

Convenient values for Alk and n include absent:1 with R<sub>4</sub>, R<sub>4</sub> and R<sub>4'</sub> as H.--

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Please replace the paragraph beginning on page 134, line 2, with the following rewritten paragraph:

-- As with Formula P5/P6 and P7/P7', Alk<sup>b</sup> in formula P8 can comprise an additional -O-R<sub>2</sub> substitution to define a compound of the formula P8'

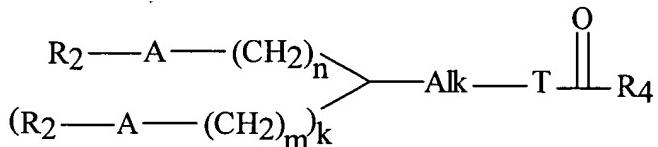


P8'

where each of the variables is as defined above.--

Please replace the paragraph beginning on page 138, line 18, with the following rewritten paragraph:

-- A still further aspect of the invention provides novel R<sub>2</sub> bearing linkers suitable for derivatisation to free functions on a Drug. Preferred linkers in accordance with this aspect of the invention include compounds of the Formulae IVa:



IVa

where R<sub>2</sub>, A, A', n, m, Q, Alk, k and T are as defined above and R<sub>4</sub> is hydroxy or an activating group such as an acid derivatives including the acid halide, such as the chloride, anhydrides derived from alkoxy carbonyl halides such as isobutyloxycarbonylchloride and the like, N-hydroxysuccinamide derived esters, N-hydroxyphthalimide derived esters, N-hydroxy-5-norbornene- 2,3-dicarboxamide derived esters, 2,4,5-trichlorophenol derived

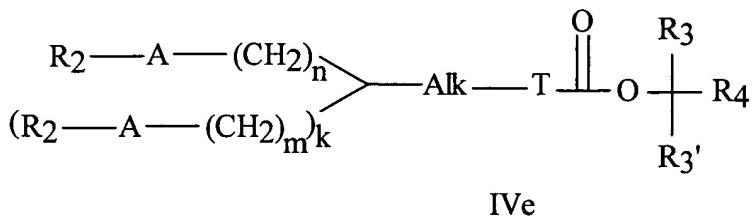
esters and the like. Compounds of Formula IVa will be particularly useful for Drugs bearing hydroxy or amine functions.--

*B26*

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Please replace the two consecutive paragraphs beginning on page 139, line 1, with the following rewritten paragraphs:

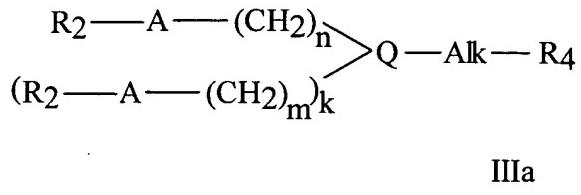
--Further preferred linkers in accordance with this aspect of the invention include compounds of the formulae IVe:



where  $R_2$ ,  $A$ ,  $A'$ ,  $n$ ,  $m$ ,  $Q$ ,  $Alk$  and  $T$  are as defined above, and  $R_4$  an activating group such as a halide, including bromo, chloro and iodo. Compounds of Formula IVe will be especially useful for Drugs bearing carboxy functions (especially those where  $T$  is O,  $R_3$  is Me and  $R_3'$  is H) or phosphoryl functions (especially those where  $T$  is a bond,  $R_3$  is isopropyl and  $R_3'$  is H).

*B27*

Alternative preferred di- or trifunctional linker compounds of this aspect of the invention include compounds of the Formulae IIIa:



where  $R_2$ ,  $A$ ,  $A'$ ,  $n$ ,  $m$ ,  $Q$  and  $Alk$  are as defined above and  $R_4$  is hydroxy or an activating moiety such as halo, including chloro, iodo and bromo.--